



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Shinya Adachi et al.

Serial No.: 10/075,164

Filed: February 14, 2002

Title: METHOD FOR TRANSMITTING LOCATION INFORMATION ON A
DIGITAL MAP

Docket No.: 34408

PETITION TO MAKE SPECIAL UNDER 37 C.F.R. § 1.102(d)

Commissioner of Patents
Washington, D.C. 20231

RECEIVED

NOV 08 2002

Technology Center 2100

Sir:

Applicant hereby petitions that the above-identified application be made special under 37 C.F.R. § 1.102(d) and MPEP § 708.02, VIII, Special Examining Procedure For Certain New Applications – Accelerated Examination. The application has not received any examination by an Examiner.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington D.C. 20231 on the date indicated below.

Aaron A. Fishman

Name of Attorney for Applicant(s)

August 21, 2002

Date

Signature of Attorney

The following are submitted herewith:

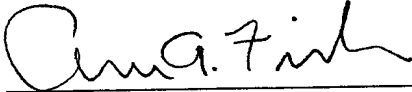
- a) A check for \$130 to cover the petition fee (37 CFR §1.17(h));
- b) A statement that a preexamination search was performed, a listing and discussion of the field of search, and a detailed discussion of the most relevant uncovered references pointing out how the claimed invention is patentable over those references; and
- c) An Information Disclosure Statement, associated form PTO-1449, and references cited therein.

All the claims in the above-captioned patent application are drawn to a single invention.

If there are any additional fees resulting from this communication not covered by the enclosed check, or if the check was omitted, please charge all uncovered fees to our Deposit Account No. 16-0820, our Order No. 34408.

Respectfully submitted,

PEARNE & GORDON LLP

By: 
Aaron A. Fishman, Reg. No. 44682

526 Superior Avenue, East
Suite 1200
Cleveland, Ohio 44114-1484
(216) 579-1700

Date: August 21, 2002



2112
#5
6
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Shinya Adachi

Serial No.: 10/075,164

Art Unit: 2112

2121

Filed: February 14, 2002

Title: METHOD FOR TRANSMITTING LOCATION INFORMATION ON A
DIGITAL MAP

Docket No.: 34408

SUPPLEMENTAL PETITION TO MAKE SPECIAL
UNDER 37 C.F.R. § 1.102(d)

RECEIVED

NOV 08 2002

Technology Center 2100

Commissioner for Patents
ATTN: TECHNICAL CENTER 2100
Washington, D.C. 20231

Sir:

Applicant hereby petitions that the above-identified application be made special under 37 C.F.R. § 1.102(d) and MPEP § 708.02, VIII, Special Examining Procedure For Certain New Applications – Accelerated Examination.

The application has not received an examination by an Examiner.

RECEIVED

NOV 14 2002

DIRECTOR OFFICE
TECHNOLOGY CENTER 2100

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Attn: Technical Center 2100, Washington D.C. 20231 on the date indicated below.

Aaron A. Fishman

Name of Attorney for Applicant(s)

November 1, 2002

Date

Signature of Attorney

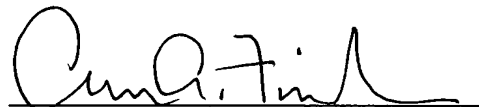
The following are submitted herewith:

- a) A copy of the originally filed Petition to Make Special Under 37 CFR § 1.102(d);
- b) A copy of the originally filed statement that a preexamination search was performed, a listing and discussion of the field of search, and a detailed discussion of the most relevant uncovered references pointing out how the claimed invention is patentable over those references;
- d) Exhibits "A" and "B" which were erroneously omitted from the Petition when it was filed; and
- c) A copy of the originally filed Information Disclosure Statement and associated form PTO-1449 (references are not included as they were submitted with originally filed Petition to Make Special).

All the claims in the above-captioned patent application are drawn to a single invention.

If there are any additional fees resulting from this communication not covered by the enclosed check, or if the check was omitted, please charge all uncovered fees to our Deposit Account No. 16-0820, our Order No. 34408.

Respectfully submitted,
PEARNE & GORDON LLP

By: 
Aaron A. Fishman, Reg. No. 44682

526 Superior Avenue, East
Suite 1200
Cleveland, Ohio 44114-1484
(216) 579-1700

Date: November 1, 2002



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Shinya Adachi et al.

Serial No.: 10/075,164

Filed: February 14, 2002

Title: METHOD FOR TRANSMITTING LOCATION INFORMATION ON A
DIGITAL MAP

Docket No.: 34408

**STATEMENT AND DISCUSSION REGARDING PREEXAMINATION SEARCH,
AND DISCUSSION OF MOST RELEVANT UNCOVERED REFERENCES
IN SUPPORT OF PETITION TO MAKE SPECIAL**

Commissioner of Patents
Washington, D.C. 20231

Sir:

Applicant hereby submits the following statement and discussion:

PREEXAMINATION SEARCH

A preexamination search was conducted, in compliance with MPEP 708.02, VIII.
Special Examining Procedure For Certain New Applications – Accelerated Examination.

An initial search covered the following International Patent Classifications:

G 08 G - Traffic control systems (search inclusive of all subclasses),

G 09 B - Educational or demonstration appliances; appliances for teaching, or
communicating with, the blind, deaf or mute; models; planetaria; globes; maps; diagrams

RECEIVED
NOV 08 2002
Technology Center 2100

(search inclusive of all subclasses), and

G 01 C - Measuring distances, levels, or bearings; surveying; navigation; gyroscopic instruments; photogrammetry (search inclusive of all subclasses).

This search area covered 12,004 publications.

Within this search area, the search was narrowed to publications containing various combinations of the following keywords in their abstracts: "road," "traffic," "map," "atlas," "transportation," "car," "vehicle," "position," "location," "reference," "route," "calculation," and "information." A search was also conducted within the above-mentioned search area being limited to publications in which "BOSCH" is listed as the patentee.

A list of the actual search sets is enclosed herewith as "Exhibit A". A total of 120 potentially relevant references were discovered in this search.

A further search was conducted covering the following International Patent Classifications:

G 08 G 001/0969 - Traffic control systems for road vehicles . Arrangements for giving variable traffic instructions (indicating arrangements for variable information by selection or combination of individual elements . . provided with indicators in which a mark progresses showing the time elapsed, e.g. of green phase . . . Systems involving transmission of navigation instructions to the vehicle having a display in the form of a map,

G 09 B 029/00 - Maps; Plans; Charts; Diagrams, e.g. route diagram,

G 09 B 029/10, - Map spot or co-ordinate position indicators; Map-reading aids, and

G 01 C 021/00 - Navigation; Navigational instruments not provided for in preceding groups.

This second search area covered 11,133 publications.

Within this second search area, the search was narrowed using various keywords and patentees. A detailed explanation of this search is enclosed herewith as "Exhibit B."

Prior to these searches, applicant was aware of additional references, which are cited in an Information Disclosure Statement (IDS).

DISCUSSION OF MOST RELEVANT REFERENCE(S)

The party conducting the search has determined that the following uncovered references appear to be the most relevant to the subject invention: WO 00/08616 (hereinafter “‘616”) and US 6,324,468 (hereinafter “‘468”). Thus, these references will be discussed with regard to patentability of the present claims. Each of these references is enclosed and cited in the IDS.

The present invention, as set forth in claim 1, is directed to a location information transmission method for reporting on-road location information on a digital map. The present invention is further directed to the steps of:

(1) an information provider reporting on-road location information including: (a) a string of coordinates representing a road shape having a length determined depending on difficulty of shape matching, (b) additional information including road attributes or node details, and (c) relative information indicating the on-road location; and

(2) a party receiving the on-road location information, performing shape matching to identify the road section on a digital map, and using the relative data to identify the on-road location.

The ‘616 publication discloses transmitting a several pairs of co-ordinates representing a traffic lane. However, ‘616 does not disclose including additional information such as road attributes or node details in order to assist in shape matching by a receiving party, as in the present invention set forth in claim 1. Since each of the limitations of the claim are not disclosed by the prior art, claim 1 and its dependent claims are patentable over the ‘616 publication.

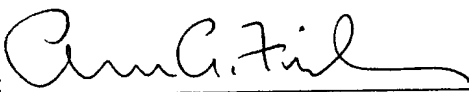
The ‘468 patent discloses a central traffic station transmitting a route to a vehicle, the route consisting of a series of turning points, and the vehicle displaying the route on a

terminal unit in the vehicle. However, '468 does not disclose including additional information in the transmission, as in claim 1. Since each of the limitations of the claim are not disclosed by the prior art, claim 1 and its dependent claims are patentable over the '468 publication.

If there are any additional fees resulting from this communication not covered by the enclosed check, or if the check was omitted, please charge all uncovered fees to our Deposit Account No. 16-0820, our Order No. 34408.

Respectfully submitted,

PEARNE & GORDON LLP

By: 
Aaron A. Fishman, Reg. No. 44682

526 Superior Avenue, East
Suite 1200
Cleveland, Ohio 44114-1484
(216) 579-1700

Date: August 21, 2002

<List of Retrieval Style>

Set No.	Items	Term	Descriptions
S01	1,729	IPC	G08G?
S02	4,768	IPC	G09B?
S03	5,575	IPC	G01C?
S04	12,004	logical expression	S01+S02+S03
S05	5,214	abstract	road
S06	4,825	abstract	traffic
S07	4,617	abstract	map
S08	38	abstract	atlas
S09	4,525	abstract	transportation
S10	7,931	abstract	car
S11	79,316	abstract	vehicle
S12	99,854	logical expression	S05+S06+S07+S08 +S09+S10+S11
S13	4,617	abstract	map
S14	38	abstract	atlas
S15	242,671	abstract	position
S16	47,604	abstract	location
S17	49,609	abstract	reference
S18	3,850	abstract	route
S19	5,432	abstract	calculation
S20	80,369	abstract	information
S21	395,367	logical expression	S13+S14+S15+S16 +S17+S18+S19+S20
S22	9	logical expression	(S01+S02+S03) * ((S05+S18) * (S07+S08) * (S10+S11)) * S15 * S16
S23	21	logical expression	(S01+S02+S03) * ((S05+S18) * (S10+S11)) * S15 * S16
S24 (List ①)	32	logical expression	(S01+S02+S03) * (S05+S18) * S15 * S16
S25	7,721	patentee	BOSCH
S26 (List ②)	58	logical expression	(S01+S02+S03) * S25
S27 (List ③)	30	logical expression	(S01+S02+S03) * S06 * S20 * S16

Search Report

Subject : Patent Search For Technologies of Navigation and Location Reference

【Subject】

Patent Search For Technologies of Navigation and Location Reference

【Term】

1993.01.01 ~ Derwent week 200242

【Data Base】

Dialog Derwent World Patents Index (DWPI)

【Field】

Whole recorded fields of the Database

【Contents】

We extract the whole technology regarding AGORA Project, especially, macro-matching or map (pattern) matching of map data, which are technologies for making a plurality of map data relate to and connect with each other. Elementally technologies are extracting similar figures, checking error matching, checking error positioning, map matching, or such.

- ※ We searched within a field connected to "road", "traffic", and "map" included in the above mentioned technical field.
- ※ Other keywords were applied to the search without limiting them to the above three keywords.

【Objective Manufactures for Search】

ERTICO, NavTech, TeleAtlas, move, BOSCH, Blaupunkt, Siemens VDO
(DDG, Traffic master, Mannesmann)

- ※ We started form "patent classification" so as to search widely regarding the important manufactures written in bold strokes.
- ※ The manufactures mentioned in the parenthesis were also searched with the keywords carefully.
- ※ Other manufactures were searched with the keywords.

【Ways for Search】

We searched the technical fields along with the following retrieval style, output patent numbers of the objective sets, and investigated each reference. We also extracted references disclosing similar or relative arts to the technologies and evaluate their relevance.

【Retrieval Style】

Set	Items	Description
S1	4940	IC=' G08G-001/0969'
S2	3586	IC=' G09B-029/00'
S3	3804	IC=' G09B-029/10'
S4	8762	IC=' G01C-021/00'
S5	11133	S1+S2+S3+S4
S6	8679	S5*(ROAD OR TRAFFIC OR MAP OR ATLAS OR TRANSPORTATION OR CAR OR VEHICLE)
S7	507	(MAP OR ATLAS OR POSITION OR LOCATION) (W) MATCH?
S8	5097	(MAP OR ATLAS OR POSITION OR LOCATION) (W) ADJUST?
S9	2960	(MAP OR ATLAS OR POSITION OR LOCATION) (W) CORRECT?
S10	164	ROUTE (W) CALCULATION OR ROUTING (W) CALUCURATION OR PATH (W) CALCULATION
S11	260	S6*(S7+S8+S9+S10)
S12	3	FAULT (W) MATCH? OR FAULT (W) ADJUST?
S13	129	ERROR (W) MATCH? OR ERROR (W) ADJUST?
S14	10597	ERROR (W) CORRECT?
S15	17	S6*(S12+S13+S14)

S16	17328	RELATIVE (W) POSITION?
S17	39	(SIMILAR+ANALOGOUS+ANALOGICUS+HOMOTHETIC) (W) FIGURE
S18	81	S6*(S16+S17)
S19	37	LOCATION (W) REFERENC?
S20	1119	S6*(POINT+LINE?+ROAD?)*(CHARACTER?+SHAPE?+GEOMETRY+TOPOLOGY +TYPE+FEATURE+DIRECTION)
S21	0	S6*(ILOC OR GOODLANE OR PIVOT (W) POINT)
S22	754	(POSITION? OR LOCATION?)*S20
S23	1074	S11+S15+S18+S19+S22
S24	4104686	PC=JP*NC=001
S25	392	S23 NOT S24
S26	218	PC=(EP+W0)*S25
S27	0	PA=ERTICO
S28	4	PA='NAVTEC'+PA='NAVTEC INC'+PA='NAVTEC INC (NAVTEC-N)'+PA='NAVTECH' +PA='NAVTECH CO LTD'+PA='NAVTECH CO LTD (NAVTEC-N)'
S29	1	PA='TELEATLAS'+PA='TELEATLAS INT BV'+PA='TELEATLAS INT BV (TELE-N)'
S30	70	PA=MOVE
S31	32265	PA=BOSCH
S32	875	PA=BLAUPUNKT
S33	72701	PA=SIEMENS
S34	102433	S27+S28+S29+S30+S31+S32+S33
S35	14	PA=DDG
S36	0	PA=TRAFFIC MASTER
S37	9151	PA=MANNESMANN
S38	9164	S35+S36+S37
S39	144	S6*S34
S40	7	S6*S38*(S7+S8+S9+S10+S12+S13+S14+S16+S17+S22)
S41	144	S39 NOT S24
S42	7	S40 NOT S24
S43	500	S25+S41+S42
S44	299	PC=(EP+W0)*S43

※ We output and investigated the references in the underlined set.

【Result of Search】

As a result of the search, we extracted 134 patent families in total. If a patent publication is written in German or French, we referred to a corresponding publication written in Japanese or English, which is belonging to the family member of the parent publication in order to investigate its details.

Please refer to the attached list of extracted patents.

In the list, relevance is expressed as follows:

<i>A</i>	◎	: Similar
<i>B</i>	○	: Highly relevant
<i>C</i>	△+	: Low relevant
<i>D</i>	△-	: Lower relevant but having same background

↑

In attached FD, expressed as above.

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat No	Kind
1	Method and structure for operating a navigation system	WO 200217268 A1	SIEMENS AG	KLEIN B&ZEH	WO 200217268 DE 10041800	A1 A1	20020228 20020321	Δ- Δ-	WO 2001DE2917 DE 1041800	A A
2	Displaying route, especially for vehicle	WO 200214788 A1	BOSCH GMBH	GEISLER T&H	WO 200214788 DE 10039235	A1 A1	20020221 20020228	O Δ	WO 2001DE2713 DE 1039235	A A
3	Retrieval method for digital map section	WO 200216874 A1	SIEMENS AG	DELLING T&H	WO 200216874 WO 200150763	A1 A1	20020228 20010712	O Δ-	WO 2000DE2907 WO 2000FR3740	A A
4	Television programme broadcast system	WO 200150763 A1	THOMSON MUL	CARBONNEL	WO 200150763 FR 2809837	A1 A1	20011207 20011207	Δ- Δ	FR 20002259 AU 200130310	A A
5	Coding, decoding and/or transmission of	DE 10033193 A1	BOSCH GMBH	FHAHLWEG C&H	DE 10033193 WO 200204894	A1 A1	20020117 20020117	O O	FR 9916744 DE 1033193	A A
6	Information and control system for vehicle	DE 10034499 A1	BOSCH GMBH	FHOLZE H&IB	DE 10034499 WO 200206772	A1 A1	20020124 20020124	Δ- Δ	DE 1034499 WO 2001DE2570	A A
7	Digital road map for automobile navigation	EP 1167923 A2	BOSCH GMBH	FHAHLWEG C&H	EP 1167923 DE 10030896	A2 A1	20020102 20020103	O Δ	EP 2001112685 DE 1030896	A A
8	Selecting map information for navigation	DE 10029198 A1	BOSCH GMBH	FBUSSE M&DR	DE 10029198 WO 200198734	A1 A1	20011220 20011227	O Δ	JP 2001189810 DE 1029198	A A
9	Method and navigational instrument for de	DE 10021373 A1	SIEMENS AG	WOSIS T&	DE 10021373 WO 200184081	A1 A1	20011108 20011108	Δ O	DE 1021373 WO 2001DE1443	A A
10	Navigation system for motor vehicles, set	EP 1150101 A1	NOV INCREMENT P	KAZAMA M&N	EP 1150101 US 20010037177	A1 A1	20011031 20011101	Δ O	EP 2001303851 US 2001842012	A A
11	Navigation device for satellite-based vehi	EP 1102036 A1	NOV TOYOTA	JIDOSUGIMOTO H&P	EP 1102036 JP 2001141492	A1 A1	20010523 20010525	O O	EP 2000124937 JP 99328430	A A
12	Navigational information display method f	US 6308132 B1	NOV HONEYWELL	INSNYDER M&W	US 6308132 WO 200196812	B1 A2	20011023 20011220	Δ Δ	US 2000592326 WO 2001US18775	A A
13	Navigation system for vehicles, has neutra	DE 10004163 A1	BOSCH GMBH	FDRAGER G&H	DE 10004163 EP 1122517	A1 A2	20010802 20010808	Δ O	DE 1004163 EP 2001100872	A A
14	Data output method for automobile driver informa	WO 200175838 A1	BOSCH GMBH	ROBERT B&W	WO 200175838 DE 10016674	A1 A1	20011011 20011018	Δ O	WO 2001DE1247 DE 1016674	A A
15	Map information changing device for motor	EP 1126245 A2	NOV MATSUSHITA	BATA T&HAMA	EP 1126245 US 20010016796	A2 A1	20010822 20010823	Δ O	EP 2001102855 US 2001781152	A A
16	Intersection display method for map displa	EP 1126266 A1	NOV MATSUSHITA	BATA T&HAMA	EP 1126266 US 20010012981	A1 A1	20010808 20010809	O O	EP 2001102141 US 2001774561	A A
17	Operating navigation system, involves tra	DE 19963766 A1	BOSCH GMBH	FBINNEWIES	DE 19963766 WO 200150089	A1 A1	20010705 20010712	Δ Δ	DE 1063766 WO 2000DE3878	A A
18	Operating navigation system, involves tra	DE 19963765 A1	BOSCH GMBH	FBINNEWIES	DE 19963765 WO 200150437	A1 A1	20010705 20010712	Δ Δ	DE 1063765 WO 2000DE3877	A A
19	Encoding and decoding objects in road net	DE 10009149 A1	BOSCH GMBH	FHAHLWEG C&H	DE 10009149 WO 200118769	A1 A1	20010308 20010315	O O	DE 1009149 WO 2000DE2701	A A
					AU 200076408	A	20010410		AU 200076408	A

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat No	Kind
20	Computer-assisted processing of structure	WO 200156752 A	SIEMENS AG	FEITEN W&B	WO 200156752 DE 10004409	A2 A1	20010809 20010906	△	WO 2001DE412 DE 1004409	A A
21	Road network related data providing method	EP 1111336 A1	NOV NAVIGATION	BECHTOLSH	EP 1111336 JP 2001227978	A1 A	20010627 20010824	△	EP 2000310804 JP 2000387632	A A
22	Data storing method in geographic database	EP 1098168 A2	NOV NAVIGATION	BOYLAN A M	EP 1098168 JP 2001201358	A2 A	20010509 20010727	○	EP 2000302881 JP 2000326025	A A
23	Encoding and decoding road network objects, inv	DE 19942522 A1	NO BOSCH GMBH	ROBERT (B	DE 19942522 WO 200118768 EP 1214697	A1 A1 A1	20010308 20010315 20020619	◎	DE 1042522 WO 2000DE3056 EP 2000963961 WO 2000DE3056	A A A A
24	Image processing apparatus for navigating	EP 1074960 A1	NOV PIONEER CORP	KASHIWAZAK	EP 1074960 JP 2001034899	A1 A	20010207 20010209	△	EP 2000115939 JP 99211273	A A
25	Navigation information transmission procedure	DE 19930796 A1	NO BOSCH GMBH	FRAEGER G&H	DE 19930796 AU 200066829 WO 200102806 EP 1198696	A1 A A1 A1	20010111 20010122 20010111 20020424	△ △ △+	DE 1030796 AU 200066829 WO 2000DE2140 EP 2000954304 WO 2000DE2140	A A A A A
26	Adapter card for navigation device has int	DE 19934837 A1	NO BOSCH GMBH	FRYCHLAK S&	DE 19934837 WO 200108086 EP 1116173	A1 A1 A1	20010125 20010201 20010718	△ △ △	DE 1034837 WO 2000DE2416 EP 2000960312 WO 2000DE2416	A A A A
27	Vehicle navigation system in which the sca	DE 19926367 A1	NO BOSCH GMBH	FUCKECK R&	DE 19926367 WO 200077474 AU 200064244 EP 1192418	A1 A1 A A1	20001214 20010221 20010102 20020403	△ △ △ △	DE 1026367 WO 2000DE1814 AU 200064244 EP 2000951206 WO 2000DE1814	A A A A A
28	Route guidance device for motor vehicle	WO 200050845 A1	N XANAVI INFO	SATO H&	WO 200050845 JP 2000241182 EP 1162432	A1 A A1	20000831 20000908 20011212	○	WO 2000JP1111 JP 9947945 EP 2000905356 WO 2000JP1111	A A A A
29	User adapted position dependent informatio	WO 200049530 A1	NITELIA AB	TECHRISTIANSS	WO 200049530 SE 9902487 SE 514052 SE 9902417 SE 9902110 EP 1196865	A1 A C2 A A A1	20000824 20000818 20010218 20000818 20000818 20020417	○	WO 2000SE306 SE 992487 SE 992418 SE 992417 SE 992110 EP 2000908202 WO 2000SE306	A A A A A A A
30	Determining the position of a vehicle inv	DE 19915212 A1	NO BOSCH GMBH	FRONKOMP D&H	DE 19915212 EP 1043600 US 6345229	A1 A1 B1	20001005 20001011 20020205	○	DE 1015212 EP 2000105755 US 2000541936	A A A

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat. No	Kind
31	Obtaining realistic road view based on digital map	WO 200063842 A1	SIEMENS AG	RITTER D&	WO 200063842 DE 20022813	A1 U1	20001026 20020516	Δ	WO 2000E1075 DE 2000U202813 WO 2000E1075	A U A
32	Method of predicting the course of a vehicle	WO 200033151 A1	BOSCH GMBH	FLICHTENBERG	WO 200033151 DE 19855400 EP 1135274	A1 A1 A1	20000608 20000615 20010926	Δ	WO 99DE3219 DE 1055400 EP 99957863 WO 99DE3219 KR 2001706779	A A A A A
33	A mobile body map matching apparatus for a vehicle	EP 1022578 A2	NOV. MATSUSHITA	ESHIMADA T&	EP 1022578 JP 2000213948	A2 A	20000726 20000804	O	EP 2000300411 JP 9912533	A A
34	Stereoscopic map display and navigation for a vehicle	EP 1024467 A2	HITACHI LTD	ENDO Y&HIRO	EP 1024467 JP 200021876 KR 2000062510	A2 A A	20000802 20000811 20001025	Δ	EP 2000101242 JP 9922616 KR 20004455	A A A
35	Vehicle navigation method uses routing algorithm	WO 200038130 A1	BOSCH GMBH	RHESSING B&	WO 200038130 DE 19859080 EP 1141910	A1 C1 A1	20000629 20000831 20011010	Δ	WO 99DE3962 DE 1059080 EP 99964431 WO 99DE3962	A A A A
36	In-vehicle driver information-navigation system	WO 200022593 A1	SIEMENS AUTOMOTIVE	ASHER H&BRUNN	WO 200022593	A1	20000420	Δ	WO 99US3614	A
37	Navigation system for vehicle, aircraft, and spacecraft	DE 19847730 A1	BOSCH GMBH	GAERTNER U&	DE 19847730 WO 200023766 EP 1046019	A1 A1 A1	20000427 20001025	Δ	AU 9933028 EP 99970492 WO 99US3614 DE 1047730 WO 99DE2205 EP 99947223 WO 99DE2205	A A A A A A A
38	Data compression method for compressing geographic data	EP 987823 A2	NAVIGATION SYSTEMS	FRIEDERICH	EP 987823 JP 2000101441 US 20010043745 US 6393149	A2 A A1 B1	20000322 20000407 20011122 20020521	Δ	EP 99306714 JP 98377973 US 98153996 US 98153996	A A A A
39	Aircraft based integrated GPS-inertial navigation system	WO 200007134 A1	NAVITON SYSTEMS	HUDDLE J R&	WO 200007134 AU 9951184 EP 1019862	A1 A A1	20000210 20000221 20000719	Δ	WO 99US16495 AU 9951184 EP 99935777 WO 99US16495	A A A A
40	Method to determine route from street network	EP 979987 A2	BOSCH GMBH	FABIAN T&	EP 979987 DE 19836485 US 6230099	A2 A1 B1	20000216 20000217 20010508	Δ	EP 9911285 DE 1036485 US 99354559	A A A

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat No	Kind
41	Navigation device	WO 9966290 A1 NOV SANYO ELECTRA BE Y&YOSH			WO 9966290	A1	19991223		WO 99JP2570	A
					JP 200007552	A	20000107	Δ	JP 98171526	A
					JP 2000018960	A	20000121		JP 98184248	A
					AU 9938486	A	20000105		AU 9938486	A
					EP 1096228	A1	20010502		EP 99921160	A
					CN 1305583	A	20010725		WO 99JP2570	A
					KR 2001071509	A	20010728		CN 99807498	A
					AU 745164	B	20020314		KR 2000714359	A
					US 6385534	B1	20020507		AU 9938486	A
									WO 99JP2570	A
42	Storage of digital street map for navigat	DE 19829801 A The	SIEMENS AG	ANDERLIK B&E	DE 19829801	A1	20000105		US 2000711455	A
					WO 200002011	A2	20000113	Δ	DE 1029801	A
43	Agricultural vehicle with arrangement for	EP 970595 A1 NOVE	CLAAS SELBSTQUINCKE G&		EP 970595	A1	20000112		WO 990E1987	A
					DE 19830858	A1	20000113		DE 1029801	A
					BR 9902661	A	20000314		EP 99112635	A
					US 20010018638	A1	20010830		DE 1030858	A
					US 6345231	B2	20020205	Δ	BR 992661	A
44	Network accessible door to door direction	WO 9960339 A1 NOV	ZIP2 CORP	ZHONG E K S&	WO 9960339	A1	19991125	Δ	US 69349562	A
					AU 9941927	A	19991206		US 99349562	A
					EP 1089201	A1	20010404		WO 99US11117	A
					US 20020002467	A1	20020103		US 9882311	A
					WO 9951940 A1 NOV	A1	19991014	⊙	WO 99US7316	A
45	Navigation system e.g. for determining cur	WO 9951940 A1 NOV	MAGELLAN DISKARUNANIDH		AU 9933794	A	19991025		AU 9933794	A
					US 6108603	A	20000822		US 9856218	A
					NO 200005009	A	20001004		US 9856218	A
					EP 1070229	A1	20010124		WO 99US7316	A
									NO 20005009	A
46	Generating method of location reference in	WO 9956264 A1 NOV	TELE ATLAS DOORENBECK		WO 9956264	A1	19991104	○	EP 9915235	A
					EP 1020832	A1	20000719		WO 99US7316	A
					EP 1078346	A1	20010228		WO 99EP2820	A
					EP 1078346	B1	20020410		EP 9920790	A
					DE 69901242	E	20020516		WO 99EP2820	A

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat. No	Kind
47	Position determination method for vehicle	DE 19818473 A The	SIEMENS AG	SCHUPFNER	DE 19818473	A1	19991104		DE 1018473	A
					WO 9956081	A2	19991104		WO 99DE1145	A
					DE 19818473	C2	20000330		DE 1018473	A
					EP 1082585	A2	20010314		EP 99926253	A
									WO 99DE1145	A
48	Data apparatus for a motor vehicle for a	WO 9947893 A1 NOV	BOSCH GMBH	ROBERLAENDER	WO 9947893	A1	19990923	△	WO 99DE710	A
					DE 19811707	A1	19990930		DE 1011707	A
					EP 1064521	A1	20010103		EP 99939851	A
					EP 1064521	B1	20020619		WO 99DE710	A
									EP 99939851	A
49	Method for issuing traffic information to	WO 9946562 A1 NOV	BOSCH GMBH	FRERSKEN U&A	WO 9946562	A1	19990916		WO 99DE632	A
					DE 19810173	A1	19991007		DE 1010173	A
					EP 1062481	A1	20001227		EP 99917777	A
									WO 99DE632	A
					JP 2002506219	W	20020226	△	WO 99DE632	A
50	Geographic data base for navigational app	EP 943895 A2 NOV	NAVIGATION	TASHBY R A&E	EP 943895	A2	19990922		JP 2000535898	A
					JP 11345247	A	19991214	○	EP 99301931	A
					US 6038559	A	20000314		JP 98377974	A
									US 9839583	A
					WO 9939161 A The	A1	19990805		WO 99DE153	A
51	On-board navigation device for automobile	WO 9939161 A The	SIEMENS AG	SCHUPFNER	DE 19803662	A1	19990819		DE 1003662	A
					DE 19803662	C2	19991202		DE 1003662	A
					EP 979387	A1	20000216		EP 99906064	A
									WO 99DE153	A
					US 6188959	B1	20010213		WO 99DE153	A
52	Navigation method especially for motor ve	EP 933745 A2 NOV	NOKIA MOBILE	HAKALA H&K	EP 933745	A2	19990804		US 99408684	A
					DE 19803659	A1	19990805		JP 99538775	A
					JP 11271083	A	19991005	△	WO 99DE153	A
					US 6240363	B1	20010529		EP 99100281	A
					DE 19748127	A1	19990506		DE 1003659	A
53	Navigation unit for motor vehicle	DE 19748127 A1 NOV	BOSCH GMBH	RKREFT P&	WO 9924787	A2	19990520		JP 9921635	A
					EP 1046018	A2	20001025		US 99238380	A
									DE 1048127	A
									WO 98DE3078	A
					JP 2001522986	W	20011120	◎	EP 98965566	A
54	Navigation unit for motor vehicle								WO 98DE3078	A
									JP 2000519745	A

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat. No	Kind
54	Computer-based route inquiry - sending data	WO 9920981 A The	SIEMENS AG	BURT A&DIE	WO 9920981	A1	19990429		WO 98DE2891	A
					EP 1025423	A1	20000809		EP 98955356	A
					EP 1025423	B1	20011121		WO 98DE2891	A
					EP 1025423	B1	20011121		EP 98955356	A
					JP 2001521142	W	20011106	Δ	WO 98DE2891	A
55	Vehicle information system for guiding veh	WO 9909374 A2 NOV	SIEMENS CORP	ASHER H&BRO	WO 9909374	A2	19990225		WO 98US17237	A
					AU 9889159	A	19990308		AU 9889159	A
					EP 1005627	A2	20000607		EP 98941003	A
					DE 59802765	G	20020221		WO 98US17237	A
					JP 2002506197	W	20020226	Δ	WO 98US17237	A
56	Automobile guidance system using onboard	EP 899704 A2 NOV	BOSCH GMBH	PHESSING B&	EP 899704	A2	19990303		JP 2000509994	A
					DE 19737256	A1	19990304		EP 98114149	A
					US 20010001847	A1	20010524		DE 1037256	A
					US 6334089	B2	20011225	O	US 98141171	A
					EP 875877 A The n	A2	19981104		US 98141171	A
57	Navigation system for detecting current po	EP 875877 A The n	PIONEER ELECT	HASHIDA M&	EP 875877	A2	19981104		EP 98107642	A
					JP 10307037	A	19981117	O	JP 97114818	A
					WO 9845724 A The	A1	19981015		WO 98DE981	A
					DE 19714600	A1	19981029		DE 1014600	A
					EP 972209	A1	20000119		EP 98929200	A
58	Satellite location device for road vehicle	WO 9845724 A The	BOSCH GMBH	F&TANN	WO 9845724	A1	19981015		WO 98DE981	A
					DE 19714600	A1	19981029		JP 98542248	A
					EP 972209	A1	20000119		WO 98DE981	A
					JP 2001519027	W	20011016	O	JP 98542248	A
					EP 863381 A The a	A2	19980909		WO 98DE981	A
59	Navigation apparatus e.g. for vehicle	EP 863381 A The a	PIONEER ELECT	HASHIDA M&	EP 863381	A2	19980909		EP 98104046	A
					JP 10253352	A	19980925		JP 9753613	A
					JP 10253373	A	19980925	O	JP 9753614	A
					US 6115668	A	20000905		US 9835911	A
					WO 9836244 A The	A2	19980820		WO 97US23048	A
60	Method for calibrating differential scale	WO 9836244 A The	MOTOROLA INC	GEIER G J&	WO 9836244	A2	19980820		EP 97955002	A
					EP 900362	A2	19990310		WO 97US23048	A
					JP 2000514195	W	20001024	O	WO 97US23048	A
					US 6230100	B1	20010508		JP 98535714	A
					DE 19753170 A The	A1	19980618		US 97792124	A
61	Transmitting recommended route in traffic	DE 19753170 A The	MANNESMANN	VIEWEG S&	DE 19753170	A1	19980618		DE 1053170	A
					WO 9827530	A1	19980625	O	WO 97DE2821	A
					EP 944896	A1	19990629		EP 97953609	A
									WO 97DE2821	A

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat No	Kind
62	Vehicle navigation system using GPS data	WO 9825107 A The	ETAK INC (EIMATHIS D L)	A2	WO 9825107	A2	19980611		WO 97US19400	A
					AU 9868629	A	19980629		AU 9868629	A
					US 5948043	A	19990907		US 96747161	A
					EP 1012537	A2	20000628		EP 97354901	A
					JP 2001508883	W	20010724	O	WO 97US19400	A
63	Navigation device with preparation of road	WO 9823918 A A na	TOYOTA JIDOSOKADA A&	A1	WO 9823918	A1	19980604		WO 97JP4295	A
					EP 940654	A1	19990908		EP 97912552	A
					JP 10524513	X	19990907		WO 97JP4295	A
					US 6268825	B1	20010731	Δ	JP 98524513	A
									WO 97JP4295	A
64	Map database for navigation system - managed	EP 848232 A The	XANAVI INFO	A2	EP 848232	A2	19980617		US 99276499	A
					JP 10171347	A	19980626	Δ	EP 97310076	A
					KR 98064451	A	19981007		JP 96332552	A
					EP 844462 A The	A2	19980527		KR 9771598	A
					CA 2221339	A	19980522		EP 97309419	A
65	More accurate position determining method	JP 10246642 A The	ZEXEL CORP	A	JP 10246642	A	19980914	Δ	CA 2221339	A
					US 6253154	B1	20010626		JP 97321522	A
					CA 2221339	C	20010731		US 96754484	A
					DE 19645209 A The	A1	19980507		CA 2221339	A
					WO 9820359	A1	19980514		DE 1045209	A
66	Vehicle positioning system using satellite	DE 19645209 A The	BOSCH GMBH	A3	EP 935760	A1	19990818		WO 97DE1945	A
					CZ 9901526		19991215		EP 97942782	A
					JP 2001503519	W	20010313	O	WO 97DE1945	A
					KR 2000053026	A	20000825		CZ 991526	A
					US 6240368	B1	20010529		WO 97DE1945	A
67	Location coding device for traffic network transmi	DE 19835051 A1 NO	BOSCH GMBH	A1	DE 19835051	A1	20000210		US 99297547	A
					WO 200008616	A1	20000217	⊙	DE 1035051	A
					EP 1105856	A1	20010613		WO 99DE1433	A
					EP 840269 A The	A1	19980506		EP 9934485	A
					JP 10160488	A	19980619	Δ	WO 99DE1433	A
68	Method of providing manoeuvre indication	EP 840269 A The	ZEXEL CORP	A	EP 840269	A	19980506		EP 97308690	A
					CA 2217753	A	19980430		JP 97298891	A
					US 5902350	A	19990511		CA 2217753	A
					CA 2217753	C	20010220		US 96741093	A
									CA 2217753	A

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No.	Kind	Date	Relevance	Applicat. No.	Kind
69	Positional information providing system for	WO 9812688 A The	TOYOTA JID03	SHIHARA F&	WO 9812688	A1	19980326		WO 97JP3185	A
					EP 932134	A1	19990728		EP 97940328	A
					JP 10514494	X	19990907		WO 97JP3185	A
					US 6178377	B1	20010123	Δ	JP 98514494	A
					KR 2001029539	A	20010406		WO 97JP3185	A
70	Method of automatically calibrating display	DE 19637616 A The	BOSCH GMBH	KREFI P&	DE 19637616	A1	19980319		DE 1037616	A
					WO 9812505	A1	19980326		WO 97DE1296	A
					EP 975483	A1	19990630		EP 97931639	A
					US 6029496	A	20000229		WO 97DE1296	A
					JP 2001500617	W	20010116	Δ-	WO 97DE1296	A
71	Cartographic data reception and display de	WO 9805019 A The	SIEMENS AG	SCHOENBAUER	WO 9805019	A1	19980205	Δ	WO 97DE1377	A
					EP 914644	A1	19990512		EP 97931695	A
					EP 914644	B1	20011121		WO 97DE1377	A
					DE 59706052	G	20020221		EP 97931695	A
									DE 506052	A
72	Navigation module for vehicle - has unit	DE 19614940 A The	BOSCH GMBH	FSCHREINER	DE 19614940	A1	19971023		DE 1014940	A
					WO 9739310	A1	19971023		WO 97DE258	A
					EP 894242	A1	19990203		EP 97914138	A
					JP 2000512739	W	20000926	Δ-	WO 97DE258	A
									JP 97536628	A
73	Vehicle navigation system with map databas	WO 9724577 A The	MAGELLAN DIS	CROYLE S R	WO 9724577	A2	19970710		WO 96US20849	A
					WO 9724577	A3	19971016		WO 96US20849	A
					EP 870173	A2	19981014		EP 96945804	A
					US 5862511	A	19990119		WO 96US20849	A
					JP 2000506604	W	20000530	○	US 95580150	A
74	Navigation device for vehicle - has data	EP 779498 A The	AISIN AW CO	HIYOKAWA T&	EP 779498	A2	19970618		WO 96US20849	A
					JP 9152349	A	19970610	Δ	EP 96119289	A
					JP 9210714	A	19970815		JP 95313379	A
					JP 9210715	A	19970815		JP 9639004	A
					KR 97002197	A	19970128		JP 9639005	A
75	Navigation device for vehicle - has data	EP 779498 A The	AISIN AW CO	HIYOKAWA T&	EP 779498	A2	19970618		KR 9652850	A
					JP 9152349	A	19970610	Δ	US 96756936	A
					JP 9210714	A	19970815			
					JP 9210715	A	19970815			
					KR 97002197	A	19970128			

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat. No	Kind
75	Navigation apparatus for vehicle finding	EP 773525 A The a	A1SIN AW C0	HAYASHI S&	EP 773525	A1	19970514		EP 96117347	A
					JP 9189560	A	19970722		JP 96296317	A
					JP 9292259	A	19971111		JP 96108148	A
					US 6035253	A	20000307		US 96735597	A
					JP 2001050763	A	20010223		JP 96108148	A
									JP 2000174596	A
					JP 3180664	B2	20010625	O	JP 96108148	A
					JP 2001324338	A	20011122		JP 96296317	A
									JP 200161428	A
					JP 2001304884	A	20011031	O	JP 96296317	A
									JP 200161427	A
					JP 2001304886	A	20011031	O	JP 96296317	A
76	Map indicator for producing route guidance	EP 766217 A The m	A1SIN AW C0	HAYASHI S&	EP 766217	A2	19970402		EP 96115646	A
					JP 9152831	A	19970610		JP 96259946	A
					JP 9159481	A	19970620		JP 96264920	A
					JP 9184736	A	19970715	Δ-	JP 96290474	A
					KR 97002791	A	19970128		KR 9642254	A
					US 5884218	A	19990316		US 96724245	A
					JP 2000035753	A	20000202		JP 96264920	A
									JP 99126497	A
					JP 2000250405	A	20000914		JP 96264920	A
									JP 200043323	A
					JP 2000250406	A	20000914		JP 96264920	A
									JP 200043324	A
77	Vehicle navigation appts. that performs r	EP 751376 A The a	A1SIN AW C0	HAYASIDA K&	EP 751376	A2	19970102		EP 96110401	A
					JP 9014984	A	19970117	Δ-	JP 95161679	A
					US 5926118	A	19990720		US 96673231	A
					EP 749103	A1	19961218		EP 96109327	A
					JP 8339163	A	19961224		JP 95146535	A
					JP 9138136	A	19970527	Δ-	JP 96144216	A
					KR 97002794	A	19970128		KR 9621748	A
					US 5913918	A	19990622		US 96665496	A
					KR 180813	B1	19990401		KR 9621748	A
					JP 3262690	B2	20020304		JP 95146535	A
					JP 3266236	B2	20020318	Δ-	JP 96144216	A
78	Map displaying automotive navigation syste	EP 749103 A The a	MATSUISHITA B&	FUKUDA H&	EP 749103	A1	19961218		EP 96109327	A
					JP 8339163	A	19961224		JP 95146535	A
					JP 9138136	A	19970527	Δ-	JP 96144216	A
					KR 97002794	A	19970128		KR 9621748	A
					US 5913918	A	19990622		US 96665496	A
					KR 180813	B1	19990401		KR 9621748	A
					JP 3262690	B2	20020304		JP 95146535	A
					JP 3266236	B2	20020318	Δ-	JP 96144216	A

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat. No	Kind.
79	Updating digital street maps for guiding	DE 19525291 C The	MANNESMANN	HEIMANN J&K	DE 19525291	C1	19961219		DE 1025291	A
					EP 752692	A1	19970108		EP 96250137	A
					US 5948042	A	19990907	Δ+	US 96676086	A
					EP 752692	B1	20000816		EP 96250137	A
					DE 59605751	G	20000921		DE 505751	A
80	Current position calculating system for v	EP 747668 A The s	XANAVI	INFOR SATO H&	ES 2148675	T3	20001016		EP 96250137	A
					EP 747668	A2	19961211		EP 96109026	A
					JP 8334364	A	19961217	◎	JP 95143567	A
					KR 97002266	A	19970124		KR 9620475	A
					US 5839087	A	19981117		US 96663757	A
81	In vehicle road data information and route	WO 9635199 A The	BOSCH GMBH	FGOSS S&KELL	KR 218213	B1	19990901		KR 9620475	A
					EP 747668	B1	20020403		EP 96109026	A
					DE 69620300	E	20020508		DE 620300	A
					WO 9635199	A1	19961107		WO 96DE698	A
					DE 19516476	A1	19961107		DE 1016476	A
82	In vehicle road traffic and navigation sys	WO 9635198 A The	BOSCH GMBH	FGOSS S&KELL	EP 769181	A1	19970423		EP 96910905	A
					JP 10503026	W	19980317	Δ	JP 96532914	A
					WO 96DE698				WO 96DE698	A
					WO 96DE691				WO 96DE691	A
					US 97765501				US 97765501	A
83	System for vehicle odometer correction for	EP 738878 A The s	XANAVI	INFOR SATO H&	EP 738878	A2	19961023		EP 96106195	A
					JP 8292040	A	19961105	○	JP 9597197	A
					US 6061627	A	20000509		US 96635115	A
					KR 275189	B	20001215		KR 9612100	A
					EP 738877	A2	19961023		EP 96105567	A
84	Current position calculating system for co	EP 738877 A The s	XANAVI	INFOR SATO H&	JP 8292044	A	19961105	◎	JP 9597201	A
					EP 738877	A3	19971210		EP 96105567	A
					US 5899554	A	19990504		US 96629853	A
					KR 231283	B1	19991201		KR 9612099	A
					EP 737866	A1	19961016		EP 96400438	A
85	Error correction device for aircraft magn	EP 737866 A The d	EUROCOPTER	F ASSOUS E C&	FR 2732773	A1	19961011		FR 954241	A
					US 5862335	A	19971028	Δ-	US 96631703	A
					DE 19531822	A1	19960411		DE 1031822	A
					WO 9611382	A1	19960418	Δ-	WO 95DE1416	A
					AU 9536970	A	19960502		AU 9536970	A
86	Destination guidance of vehicle on travel	DE 19531822 A The	MANNESMANN	ALBRECHT U&	DE 19531822	A1	19960411		DE 1031822	A
					WO 9611382	A1	19960418	Δ-	WO 95DE1416	A
					AU 9536970	A	19960502		AU 9536970	A

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat No	Kind
87	Determining directional change during veh	WO 9601462 A The	SIEMENS AG	HERMANS H	WO 9601462 EP 715749	A1	19960118		WO 951B509	A
						A1	19960612		EP 95921094	A
					JP 9502806	W	19970318	○	WO 951B509	A
									JP 96503761	A
					US 5908466	A	19990601		US 95494532	A
					EP 715749	B1	20020417		EP 95921094	A
					DE 69526410	E	20020523		WO 951B509	A
									DE 626410	A
									EP 95921094	A
									WO 951B509	A
88	Route selector and monitor for motor vehicl	DE 4415993 A The	BOSCH GMBH	KREFT P&	DE 4415993 WO 9530881	A1	19951109		DE 4415993	A
					CZ 9603243	A3	19970212		WO 95DE536	A
					EP 759151	A1	19970226		CZ 963243	A
					HU 76227	T	19970728		EP 95915800	A
									WO 95DE536	A
									WO 95DE536	A
									HU 963066	A
					JP 10500208	W	19980106	◎	JP 95528584	A
					US 6002981	A	19991214		WO 95DE536	A
					RU 2151379	C1	20000620		WO 95DE536	A
89	Location and navigation appts. with satel	DE 4332945 A The	BOSCH GMBH	KREFT P&	DE 4332945 WO 9509348	A1	19950330		DE 4332945	A
					EP 721570	A1	19960717		WO 94DE1036	A
					HU 73906	T	19961028		EP 94925354	A
									WO 94DE1036	A
					JP 9504103	W	19970422	◎	WO 94DE1036	A
					EP 721570	B1	19980708		JP 95510043	A
					DE 59406424	G	19980813		EP 94925354	A
									WO 94DE1036	A
					ES 2118427	T3	19980916		DE 506424	A
					US 5995023	A	19991130		EP 94925354	A
					HU 220492	B1	20020228		WO 94DE1036	A
									US 96619651	A
									WO 94DE1036	A
									HO 96771	A
									WO 94DE1036	A
									JP 95510043	A
									EP 94925354	A
									WO 94DE1036	A
									DE 506424	A
									EP 94925354	A

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat. No	Kind
90	Map-matching in navigation route guidance	WO 9504325 A The MOTOROLA INSEYMOUR L			WO 9504325	A1	19950209		WO 94US7197	A
					EP 664040	A1	19950726		EP 94931731	A
					US 5488559	A	19960130		WO 94US7197	A
					EP 664040	A4	19960306		US 93100804	A
					JP 8502591	W	19960319	©	EP 94931731	A
					EP 664040	B1	20000223		WO 94US7197	A
					DE 69423090	E	20000330		JP 95505822	A
									EP 94931731	A
									WO 94US7197	A
									DE 623090	A
91	Locating mobile stations in digital teleph	SE 500769 B An ad TELIA AB (TELSSON B&			SE 500769	B	19940829		WO 94US7197	A
					EP 631453	A2	19941228		SE 932140	A
					EP 631453	A3	19950719		EP 94850095	A
					US 5564079	A	19961008	Δ+	EP 94850095	A
					EP 631453	B1	20011219		US 94251366	A
					DE 69429472	E	20020131		EP 94850095	A
									DE 629472	A
									EP 94850095	A
									WO 94US88	A
									AU 9459903	A
92	Determination of current vehicle position	WO 9416504 A The ZEXEL CORP. KAO W&			WO 9416504	A1	19940721		US 93950	A
					AU 9459903	A	19940815		EP 94906016	A
					US 5374933	A	19941220		WO 94US88	A
					EP 678228	A1	19951025		EP 94906016	A
					EP 678228	A4	19960320		JP 94516153	A
					JP 8502827	W	19960326	Δ	WO 94US88	A
									AU 9459903	A
					AU 683240	B	19971106		CA 2150942	A
					CA 2150942	C	19990706		WO 94US88	A
					KR 262057	B1	20000715		WO 94US88	A
93	Navigation appts mounted on road vehicle	EP 607654 A The PIONEER ELECTRODAGAWA S&			EP 607654	A2	19940727		KR 95702736	A
					EP 607654	A3	19941109		EP 93308303	A
					EP 607654	B1	19970910		EP 93308303	A
					DE 69313812	E	19971016		DE 613812	A
					US 5742923	A	19980421		EP 93308303	A
					JP 3157923	B2	20010423	©	US 93137267	A
									JP 92281252	A
									EP 93308110	A
					EP 593256	A1	19940420		US 93132826	A
					US 5442559	A	19950815		EP 93308110	A
94	Map matching appts. for vehicle navigation	EP 593256 A The PIONEER ELECTROKAWAHARA S&			EP 593256	B1	19961211		DE 606523	A
					EP 593256	E	19970123		EP 93308110	A
					DE 69306523				EP 93308110	A
									JP 92275853	A

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat. No	Kind
95	Navigation system for motor vehicle - uses	GB 2271420 A Dist	FORD WERKE	M	GB 2271420	A	19940413		GB 9221107	A
					WO 9408250	A1	19940414	Δ	WO 93682071	A
					EP 664007	A1	19950726		EP 93922017	A
					EP 664007	B1	19970326		WO 93682071	A
					DE 69309295	E	19970430		EP 93922017	A
96	Traffic radio receiver for optimum route	DE 4208277 A The	BOSCH GMBH	P&B	DE 4208277	A1	19930916		DE 4208277	A
					WO 9318495	A1	19930916		WO 93DE145	A
					EP 584310	A1	19940302		EP 93903809	A
					JP 6507747	W	19940901	Δ	WO 93DE145	A
					US 5465088	A	19951107		WO 93DE145	A
97	Velocity coefficient correction for vehic	EP 544403 A The n	MATSUHITA	E	EP 544403	A1	19930602		EP 92309692	A
					CA 2081185	A	19930426		CA 2081185	A
					US 5483457	A	19960109		US 92963751	A
					US 5539647	A	19960723	Δ	US 92963751	A
					EP 544403	B1	19960925		US 95530586	A
98	Location detection appts. with overspeed	EP 543543 A The a	SUMITOMO ELE	MATSUZAKI	EP 543543	A1	19930526		EP 92309692	A
					US 5337245	A	19940809		DE 614098	A
					CA 2081185	C	19961203		EP 92309692	A
					EP 543543	A1	19930526		CA 2081185	A
					JP 3227741	B2	20011112	Δ	EP 92310198	A
99	High accuracy sensor system for on-vehic	WO 9309509 A The	MOTOROLA INC	BARNES	WO 9309509	A1	19930513		US 92970075	A
					EP 570581	A1	19931124		JP 91302176	A
					JP 6504131	W	19940512	Δ	WO 92US7870	A
					EP 570581	A4	19940810		EP 93909338	A
					US 5434788	A	19950718		JP 93508387	A
99	High accuracy sensor system for on-vehic	WO 9309509 A The	MOTOROLA INC	BARNES	WO 9309509	A1	19930513		EP 93909338	A
					EP 570581	A1	19931124		US 91786500	A
					JP 6504131	W	19940512	Δ	US 94260507	A
					EP 570581	A4	19940810		WO 92US7870	A
					US 5434788	A	19950718		EP 93909338	A
99	High accuracy sensor system for on-vehic	WO 9309509 A The	MOTOROLA INC	BARNES	WO 9309509	A1	19930513		US 91786500	A
					EP 570581	A1	19931124		US 94260507	A
					JP 6504131	W	19940512	Δ	WO 92US7870	A
					EP 570581	A4	19940810		EP 93909338	A
					US 5434788	A	19950718		DE 632261	A
99	High accuracy sensor system for on-vehic	WO 9309509 A The	MOTOROLA INC	BARNES	WO 9309509	A1	19930513		WO 92US7870	A
					EP 570581	A1	19931124		EP 93909338	A
					JP 6504131	W	19940512	Δ	DE 632261	A
					EP 570581	A4	19940810		WO 92US7870	A
					US 5434788	A	19950718		EP 93909338	A

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat No	Kind
100	Navigation system with relative and absolute navigation	WO 9305587 A The ETAK INC (EIMATHIS D L)	WO 9305587	A1	19930318	A	19930318	WO 92US6442	WO 92US6442	A
101	Global positioning system for vehicle navigation	EP 527558 A The PIONEER ELECTRONIC CORP	EP 527558	A1	19930217	A	19930217	EP 92306331	EP 92306331	A
102	Town map representation for motorist navigation	DE 4111147 A The BOSCH GMBH	DE 4111147	A	19921008	A	19921008	DE 4111147	DE 4111147	A
103	Motor vehicle guidance and navigation system	DE 4039887 A The BOSCH GMBH	DE 4039887	A1	19920617	A	19920617	DE 4039887	DE 4039887	A
104	Land vehicle navigation apparatus - display	WO 9204683 A The MOTOROLA INC	WO 9204683	A	19920319	A	19920319	WO 91US5968	WO 91US5968	A

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat No	Kind
105	On-board receiver for automotive navigation	EP 478438 A The n	BABSKY J (B	BABSKY J	EP 478438	A	19920401		EP 91402534	A
					FR 2667423	A1	19920403		FR 9011993	A
					CA 2052370	A	19920329		CA 2052370	A
					JP 4305684	A	19921028	O	JP 91249607	A
					EP 478438	B1	19951213		EP 91402534	A
106	Geographical interactive automated mapping	WO 9202891 A The	GEORESEARCH	KONG A C F	DE 69115417	E	19960125		DE 615417	A
					ES 2080924	T3	19960216		EP 91402534	A
					WO 9202891	A	19920220		AU 9187389	A
					AU 9187389	A	19920302		WO 91US5629	A
					US 5214757	A	19930525	O	US 90564018	A
107	Vehicle position determination method - m	EP 471405 A Vehicle	PHILIPS	GLOERHANS H	EP 471405	A	19920219		EP 91202018	A
					NL 9001810	A	19920302		NL 901810	A
					BR 9103444	A	19920505		BR 913444	A
					US 5307278	A	19940426		US 91742787	A
					EP 471405	B1	19961120		EP 91202018	A
108	Navigation apparatus for driver, etc. - d	WO 9102943 A Upon	TSUYUKI T (T	TSUYUKI T &	DE 69123199	E	19970102		DE 623199	A
					KR 185581	B1	19990415		EP 91202018	A
					JP 3255944	B2	20020212	O	KR 9113762	A
					WO 9102943	A	19910307		JP 91226454	A
					AU 9061679	A	19910403			
109	Navigation apparatus for driver, etc. - d	WO 9102943 A Upon	TSUYUKI T (T	TSUYUKI T &	EP 489915	A1	19920617		EP 90912375	A
					AU 644808	B	19931223		WO 90JP1064	A
					US 5351059	A	19940927	Δ	AU 9061679	A
					EP 489915	A4	19930512		WO 90JP1064	A
					EP 489915	B1	19960131		US 92834552	A
110	Navigation apparatus for driver, etc. - d	WO 9102943 A Upon	TSUYUKI T (T	TSUYUKI T &	DE 69025192	E	19960314		EP 90912375	A
					CA 2066038	C	19971104		WO 90JP1064	A
					KR 9701143	B1	19970129		CA 2066038	A
					EP 489915	B2	20000209		WO 90JP1064	A
									KR 92700400	A

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat. No	Kind
109	Three-dimensional topographic map display	EP 378271 A A par	PHILIPS ELECTRONICS	DE	EP 378271	A	19900718		EP 90200044	A
					NL 8900056	A	19900801		US 9046366	A
					US 5161886	A	19921110	Δ	US 91798264	A
					EP 378271	B1	19960403		EP 90200044	A
					DE 69026288	E	19960509		DE 626288	A
110	Adaptive in-vehicle route guidance system	EP 372840 A The i	SUMITOMO ELECTRIC	JP	KR 147049	B1	19980915		EP 90200044	A
					US 5161886	C1	20011030		KR 90201	A
					EP 372840	A	19900613		US 90463696	A
					US 5031104	A	19910709		US 91798264	A
					EP 372840	A3	19920415		EP 89312522	A
111	Vehicle navigation system - directs course	WO 9001679 A Rout	AISIN AW CO	JP	EP 372840	B1	19951102		EP 89312522	A
					DE 68924697	E	19951207		DE 624697	A
					JP 10104013	A	19980424	Δ	EP 89312522	A
					EP 372840	A	19900613		JP 8988441	A
					US 5031104	A	19910709		JP 97209376	A
112	Road drawing system for navigation apparatus	EP 355232 A The r	AISIN AW CO	JP	WO 9001679	A	19900222	O	EP 89312522	A
					EP 380673	A	19900808		EP 89900883	A
					US 5067082	A	19911119		US 80408504	A
					EP 380673	A4	19920909		EP 89900883	A
					EP 355232	A	19900228		EP 88312449	A
113	Vehicle navigation appts. using dead reckoning	EP 349977 A The v	MAZDA MOTOR	JP	JP 10318773	A	19981204		JP 88209053	A
					JP 10318774	A	19981204		JP 9870826	A
					JP 10318775	A	19981204		JP 88209053	A
					JP 10318776	A	19981204		JP 9871042	A
					JP 2984645	B2	19991129		JP 88209053	A
113	Vehicle navigation appts. using dead reckoning	EP 349977 A The v	MAZDA MOTOR	JP	JP 2984646	B2	19991129		JP 9871043	A
					JP 2000028389	A	20000128		JP 88209053	A
					JP 3257991	B2	20020218	Δ	JP 9871044	A
					EP 349977	A	19900110		JP 9871044	A
					US 5046011	A	19910903	⊙	JP 9871044	A
113	Vehicle navigation appts. using dead reckoning	EP 349977 A The v	MAZDA MOTOR	JP	EP 349977	B1	19930120		JP 99198150	A
					DE 68904484	E	19930304		JP 88209053	A
					EP 349977	A	19900110		JP 9871044	A
					US 5046011	A	19910903	⊙	JP 9871044	A
					DE 68904484	E	19930304		JP 99198150	A

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat No	Kind
114	Vehicle navigation system - corrects dist	WO 8906344 A The	A1SIN AW CO	TOYAMA Y&Y	WO 8906344	A	19890713		WO 88JP1304	A
					EP 352332	A	19900131		EP 89000887	A
					US 5130709	A	19920714	Δ	US 89408499	A
					EP 352332	A4	19911113		US 91686288	A
115	Navigation system for motor vehicle e.g.	WO 8906342 A A cu	A1SIN AW CO	MANBA A&YOH	WO 8906342	A	19890713		WO 88JP1302	A
					EP 349652	A	19900110		EP 89900885	A
					US 5043902	A	19910827		US 89408503	A
					EP 349652	A4	19911211		EP 89900885	A
					EP 349652	B1	19960327		WO 88JP1302	A
					JP 8054252	A	19960227	Δ	EP 89900885	A
					DE 3855162	G	19960502		JP 87333045	A
									JP 95189445	A
									DE 3855162	A
									WO 88JP1302	A
									EP 89900885	A
										A
116	Display unit of navigation system - has d	WO 8906341 A An o	A1SIN AW CO	MOROTO S&M	WO 8906341	A	19890713		WO 88JP1299	A
					EP 346491	A	19891220		EP 89900882	A
					US 5121326	A	19920609		US 88408482	A
					EP 346491	A4	19920819		US 91666485	A
					JP 10074043	A	19980317	Δ+	EP 89900882	A
									JP 88178426	A
									JP 97108849	A
									EP 88113653	A
117	Helmet mounted navigational HD - has sm	EP 315742 A A nav	DEUT AEROSP	BENEDIKTER	EP 315742	A	19890517		DE 3737972	A
					DE 3737972	A	19890524		US 88265217	A
					US 4930888	A	19900605	○		A
					DE 3737972	C	19920227			A
	Travel path display appts. for automobile	EP 302736 A The d	HONDA GIKEN	IHOSHI A&I	EP 302736	A	19890208		EP 88307240	A
					US 4963864	A	19901016		US 88224985	A
					EP 302736	B1	19920603		EP 88307240	A
					DE 3871644	G	19920709		DE 3871644	A
118					US 5170165	A	19921208	◎	EP 88307240	A
					CA 1326273	C	19940118		US 88224985	A
					EP 296016	A	19881221		US 90514304	A
					FR 2616333	A	19881216		CA 572942	A
119	Location system for moving object e.g. ro	EP 296016 A A mov	COMMISSARIA	LERAT B&	EP 296016	A	19881221		EP 88401368	A
					US 4840445	A	19890620			A
					DE 3719017	A	19881215		US 88204674	A
					WO 8809974	A	19881215		DE 3719017	A
	Travel route determination for land vehic	EP 323485 A Proce	BOSCH GMBH	RNEUKIRCHNE	EP 323485	A	19890712		WO 88DE329	A
					US 4984168	A	19910108	○	EP 88904495	A
					EP 323485	B1	19920826		US 89307088	A
					DE 3874115	G	19921001		EP 88904495	A
120									WO 88DE329	A
									DE 3874115	A
									EP 88904495	A
									WO 88DE329	A

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat No	Kind
121	Automatic course control system for land	EP 239803 A The c	BOSCH GMBH RNEUK RCHNE		EP 239803	A	19881109		EP 88105617	A
					DE 3715007	A	19881117		DE 3715007	A
					US 5040122	A	19910813	O	US 88190239	A
122	Route information system for commercial r	EP 331675 A Navig	BOSCH GMBH RFECHNALL W		WO 8805199	A	19880714		WO 87DE510	A
					DE 3700552	A	19880721		DE 3700552	A
					EP 331675	A	19890913		EP 87907305	A
123	Position correction for road vehicle navig	DE 3642986 A The	BOSCH GMBH RHANEKL R&P		JP 2501959	W	19900628	Δ-	JP 87506735	A
					EP 331675	B	19911218			
					DE 3775410	G	19920130			
124	Travel path display for running body e.g.	EP 272077 A A dist	HONDA GIKEN	I IHOSHI A&N	US 5146219	A	19920908		US 89392926	A
					DE 3642986	A	19880707		US 91637060	A
					EP 276366	A	19880803	Δ	DE 3642986	A
125	Vehicle location detection system for pred	EP 270911 A Dista	SUMITOMO ELEMITOH K&SH		DE 3642986	C	19890126		EP 87113077	A
					EP 276366	B	19911116			
					DE 3774422	G	19911212			
126	Satellite own position measuring method fo	EP 264756 A Sate	HITACHI LTD	KURIHARA M	ES 2026502	T3	19920501		EP 87113077	A
					EP 272077	A	19880622		EP 87311002	A
					US 4893246	A	19900109	O	US 87130680	A
127	Navigation device for vehicle using small	EP 261404 A A mag	SIEMENS AG	WUTTKE G&	CA 1296789	C	19920303			
					EP 272077	B1	19950802		EP 87311002	A
					DE 3751435	G	19950907		DE 3751435	A
128	Vehicle location detection system for pred	EP 270911 A Dista	SUMITOMO ELEMITOH K&SH		EP 270911	A	19880615		EP 87311002	A
					WO 8808961	A	19881117		EP 8717315	A
					US 4807127	A	19890221	◎	WO 87JP452	A
129	Satellite own position measuring method fo	EP 264756 A Sate	HITACHI LTD	KURIHARA M	EP 314806	A	19890510		US 87123362	A
					US 4999783	A	19910312		EP 88903963	A
					EP 314806	A4	19910821		US 88295206	A
130	Navigation device for vehicle using small	EP 261404 A A mag	SIEMENS AG	WUTTKE G&	EP 314806	B1	19950419		EP 88903963	A
					DE 3853611	G	19950524		EP 88903963	A
									WO 88JP452	A
131	Satellite own position measuring method fo	EP 264756 A Sate	HITACHI LTD	KURIHARA M	DE 3853611	G	19950524		DE 3853611	A
									EP 88903963	A
									WO 88JP452	A
132	Navigation device for vehicle using small	EP 261404 A A mag	SIEMENS AG	WUTTKE G&	EP 264756	A	19880427		EP 87114844	A
					US 4924699	A	19900515	◎	US 87106664	A
					EP 264756	B1	19940803		EP 87114844	A
133	Satellite own position measuring method fo	EP 264756 A Sate	HITACHI LTD	KURIHARA M	DE 3750323	G	19940908		DE 3750323	A
									EP 87114844	A
					KR 9611782	B1	19960830		KR 8711251	A
134	Navigation device for vehicle using small	EP 261404 A A mag	SIEMENS AG	WUTTKE G&	EP 261404	A	19880330		EP 87112115	A
					US 4819175	A	19890404	◎	US 8798087	A
					EP 261404	B	19910213			
135	Satellite own position measuring method fo	EP 264756 A Sate	HITACHI LTD	KURIHARA M	DE 3768023	G	19910321			
					ES 2019912	B	19910716			

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat No	Kind
128	Moving body path display e.g. for vehicles	EP 242050 A The t	HONDA GIKEN	ICHIKAWA A	EP 242050	A	19871021		EP 87302089	A
					US 4963865	A	19901016	©	US 8725848	A
					EP 242050	B	19911227			
					DE 3775447	G	19920206			
129	Navigational system for vehicle - include	DE 3519276 A A d	BOSCH GMBH	KONIG W&RADE	CA 1295737	C	19920211			
					DE 3519276	A	19861204		DE 3519276	A
					WO 8607143	A	19861204		WO 860E150	A
					AU 8656914	A	19861224			
130	Navigation system for automatic vehicle -	GB 2169725 B The	GENERAL ELECTRIC	REEVE J P&G	JP 62503050	W	19871203	△	JP 86502094	A
					EP 262122	A	19880406		EP 86902320	A
					US 4888699	A	19891219		US 88274654	A
					EP 262122	B	19900704			
131	Electronic traffic guidance nad informati	EP 169954 A The s	DE VILLEROCH	VILLEROCH	DE 3672494	G	19900809			
					GB 2169725	A	19860716		GB 86703	A
					WO 8604430	A	19860731		WO 866821	A
					EP 207989	A	19870114		EP 86900797	A
132	Mobile vehicle navigation system - stores	EP 69965 A The X	NIPPONDENSO	AKUTSU K&H	JP 62501383	W	19870604	△	JP 86500623	A
					GB 2169725	B	19880706			
					US 4847769	A	19890711		US 86816207	A
					CA 1269740	A	19900529		EP 86900797	A
133	Mobile vehicle navigation system - stores	EP 69965 A The X	NIPPONDENSO	AKUTSU K&H	EP 207989	B1	19920729		EP 86900797	A
					DE 3686213	G	19920903		WO 866821	A
					KR 9311722	B1	19931218		WO 866821	A
					EP 169954	A	19860205		KR 86700636	A
134	Electronic traffic guidance nad informati	EP 169954 A The s	DE VILLEROCH	VILLEROCH	WO 8601023	A	19860213		EP 84401584	A
					JP 61502989	W	19861218	△+	WO 85FR202	A
					CA 1245358	A	19881122		JP 85503299	A
					EP 169954	B	19881228			
135	Mobile vehicle navigation system - stores	EP 69965 A The X	NIPPONDENSO	AKUTSU K&H	DE 3475842	G	19890202			
					US 4951211	A	19900821		US 89349935	A
					EP 169954	B2	19950906		EP 84401584	A
					EP 69965	A	19830119		EP 82106005	A
136	Mobile vehicle navigation system - stores	EP 69965 A The X	NIPPONDENSO	AKUTSU K&H	US 4470119	A	19840904	△	US 82395339	A
					EP 69965	B	19861015			
					DE 3273841	G	19861120			

Related Art for Navigation and Location Reference

AN	Title	Abstract	PA	IN	Patent No	Kind	Date	Relevance	Applicat No	Kind
133	Navigation system for locating position of	EP 61564 A The ap	E. SYSTEMS	INKEARN	EP 61564	A	19821006		EP 82100387	A
					NO 8200210	A	19821025			
					PT 74231	A	19830421			
					ES 8306536	A	19830901			
					US 4495580	A	19850122	A	US 81248803	A
					US 4558418	A	19851210		US 83491925	A
					EP 61564	B	19870422			
134	Map information display method for automobile na	EP 1113410 A2 NOV	BOSCH GMBH	ROBERT	DE 3276133	G	19870527			
					EP 1113410	A2	20010704		EP 2000123095	A
					US 20010007088	A1	20010705	©	US 2000742734	A
					DE 19963764	A1	20010705		DE 1063764	A